

Abstract of the Disclosure

A semiconductor device with an epitaxially grown titanium silicide layer having a phase of C49 and a method for
5 fabricating the same. The titanium silicide layer has a predetermined interfacial energy that does not transform the phase of the titanium layer, and thus, occurrences of agglomeration of the titanium layer and a grooving phenomenon can be prevented. The semiconductor device includes: a
10 silicon layer; an insulation layer formed on the silicon layer, wherein a partial portion of the insulation layer is opened to form a contact hole exposing a partial portion of the silicon layer. An epitaxially grown titanium silicide layer having a phase of C49 and is formed on the exposed
15 silicon substrate disposed within the contact hole; and a metal layer is formed on an upper surface of the titanium silicide layer.